

Appl. No. 10/662,073
Amdt. dated January 15, 2008
Reply to Office Action of December 28, 2007

Amendments to the Drawings:

Please substitute the enclosed eight (8) sheets of formal drawings for the drawings presently of record.

Attachment: Replacement Sheets & New Sheets

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REMARKS

Applicant's attorney thanks the Examiner for her attention to this application and appreciates the time she has given to Applicants. Claims 1-10 and 12-26 are presented for the Examiner's consideration. Claims 1, 2, 12, 13 and 23 have been amended to clarify that the liquid capacity is the equilibrium absorption capacity as measured by the FAUZL test. Support for this amendment can be found in the originally filed Specification on page 31 lines 15-25. Claims 1, 12 and 23 have also been amended to clarify that the superabsorbent material has been neutralized from about 30 mole % to about 65 mole % with a monovalent metal hydroxide, and further from about 5 mole % to about 40 mole % with a divalent metal hydroxide. Support for this amendment can be found in the originally filed Specification on page 11 lines 19-20, page 12 lines 5-6, page 12 lines 28-29, page 13 lines 14-15, page 14 lines 4-5, page 14 lines 29-30, page 15 lines 15-16 and page 16 lines 4-5. Claims 1, 12 and 23 have also been amended to remove the feature of the absorbent composite exhibiting a Drop Penetration Value of about 2 seconds or less as measured by the Saline Drop Penetration Test. Claims 9 and 20 have been amended to replace the phrase "zoned along the perimeter" with the phrase "incorporated primarily away from a target area". Support for this amendment can be found in the originally filed specification on page 8 lines 1-3. Claims 10, 11 and 21 have been canceled.

Pursuant to 37 C.F.R. § 1.111, reconsideration of the present application in view of the foregoing submissions and the following remarks is respectfully requested.

1. Objection to the drawings.

In paragraph 2 of the Office Action mailed May 3, 2007, the Office objected to the drawings under 37 CFR 1.83(a). The Office states the drawings must show every feature of the invention specified in the claims. The Office states, therefore, the invention as claimed in claims 5-10 and 16-21 still must be shown or the feature(s) canceled from the claim(s). The Office also states no new matter should be entered.

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a. Drawings provided herewith.

Claims 10 and 21 have been canceled.

Figure 11 is an absorbent composite wherein the superabsorbent material is substantially homogeneously distributed within the absorbent composite. Support for this figure can be found in the Specification on page 7 lines 33-35, page 8 lines 5-6, page 9 lines 28-32 and originally filed claims 5 and 16. No new matter has been added.

Figure 12 is an absorbent composite wherein the superabsorbent material is zoned within a target area of the absorbent composite. Support for this figure can be found in the Specification on page 3 lines 14-16, page 6 lines 13-21, page 7 line 35 – page 8 line 3, page 9 lines 28-32 and originally filed claims 6 and 17. No new matter has been added.

Figure 13 is an absorbent composite comprising a plurality of layers where the superabsorbent material is located in a layer of the absorbent composite. Support for this figure can be found in the Specification on page 8 lines 8-23, page 9 line 28 – page 10 line 4 and originally filed claims 7 and 18. No new matter has been added.

Figure 14 is an absorbent composite comprising a plurality of layers where the superabsorbent material is zoned within a target area of a layer of the absorbent composite. Support for this figure can be found in the Specification on page 3 lines 14-16, page 6 lines 13-21, page 7 line 35 – page 8 line 3, page 8 lines 8-23, page 9 line 28 – page 10 line 4, and originally filed claims 8 and 19. No new matter has been added.

Figure 15 is an absorbent composite where the superabsorbent material is incorporated primarily away from a target area of the absorbent composite. Support for this figure can be found in the Specification on page 8 lines 1-3 and page 9 lines 28-32. No new matter has been added.

2. Clarity of terms in Specification.

In paragraph 3 of the Office Action mailed May 3, 2007, the Office states 35 U.S.C. 112, first paragraph, requires the specification to be written in “full, clear, concise, and exact terms.” The Office states the specification is replete with terms which are not clear, concise, and exact. The

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Office also states the specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Further, the Office states examples of some unclear, inexact or verbose terms used in the specification are: page 6, line 33.

a. Clarity of terms.

Applicants are unclear as to the statement by the Office regarding the use of unclear, inexact or verbose terms used in the specification. For example, at page 6 line 33, Applicants are unsure as to what term the Office is concerned with. Applicants respectfully request clarification as to which term presents a concern, and as to why the Office believes that the term is unclear, inexact or verbose, in accordance with the MPEP.

3. Objection to the Summary.

In paragraph 4 of the Office Action mailed May 3, 2007, the Office objects to the disclosure because of the following informalities: The Summary of the Invention section on page 3, i.e. a description of the claimed invention, and the invention of the claims are still not commensurate in scope. The Office states that, at the very least, see the discussion *infra*, the description of the invention is inconsistent. The Office states, for example, throughout the claims the invention is now set forth as a composite including superabsorbent material which composite has a specific Drop Penetration Value. The Office also states, however, e.g., bridging pages 5-6 it is set forth that the Drop Penetration Value is a property of the superabsorbent material which is not what is claimed. Further, the Office states for a second example, the neutralization of the superabsorbent material as claims is not consistent with what is disclosed in the Examples 1-8. The Office states, therefore, at the very least a consistent description of what the invention is should be set forth throughout the specification. Additionally, the Office states appropriate correction is required.

a. Summary amended.

Applicants have amended the specification on page 3 starting at line 4 to remove the feature of "a Drop Penetration Value of about 2 seconds or less for the absorbent composites of the present invention" and to include the feature of "the superabsorbent material has been neutralized from 30

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mole % to 65 mole % with a monovalent metal hydroxide, and further from 5 mole % to 40 mole % with a divalent metal hydroxide.” Support for this amendment can be found on page 11 lines 19-20, page 12 lines 5-6, page 12 lines 28-29, page 13 lines 14-15, page 14 lines 4-5, page 14 lines 29-30, page 15 lines 15-16 and page 16 lines 4-5. Applicants believe that this amendment overcomes the objection, and that the Summary is commensurate with the scope of the claims. Applicants respectfully request that this objection be withdrawn.

4. Claims 1-10 and 12-26 are rejected under 35 U.S.C. 112, first paragraph.

In paragraph 5 of the Office Action mailed May 3, 2007, the Office states claims 1-10 and 12-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The Office states the claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Office also states the claims now require a superabsorbent material which has an Absorption Time of about 5+10 a2 minutes or greater, wherein a is the mean particle size of the superabsorbent material in millimeters, and a liquid capacity of about 15 g/g or greater and which has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and neutralized from 5 mole % to 40 mole % with a divalent metal hydroxide and an absorbent composite which exhibits a Drop Penetration Value of about 2 seconds or less as measured by the Saline Drop Penetration Test. Further, the Office states that Applicant cites a plurality of places for support for such added claim language in the second to last full paragraph of page 19 of the 2-12-07 response. The Office states, however, while such places provided support for specific wt % of acrylic acid being first neutralized with sodium hydroxide to one specific mole percentage, e.g. 60% at page 11, lines 19-20, 50% at page 12, line 6, 30% at page 12, line 29, 40% at page 13, line 5, 30% at page 14, line 5, 55% at page 14, line 30, 50% at page 15, line 16 and 65% at page 16, line 5 and then neutralized further with a divalent metal hydroxide, i.e. a further 10% with calcium hydroxide, a further 20% with calcium hydroxide, a further 40% with calcium hydroxide, a further 30% with magnesium hydroxide, a further 40% with calcium hydroxide, a further 15% with calcium hydroxide, a further

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20% with magnesium hydroxide and a further 55% with calcium hydroxide, respectively, and then still further specifically processed, e.g. other additional materials, coatings, etc., this is not what is claimed. Additionally, the Office states the support, i.e., the Examples, relied upon by Applicant result in materials or composites which have a combination of properties, see, e.g., Table 1 on page 17, which are not the combinations claimed. For example, the Office instructs Applicants to see the Measured Absorption Time of Examples 7 and 8 relied upon and that claimed in claims 3 and 14 and the Gel Bed Permeability of Examples 3 and 4 and that claimed in claims 4 and 15 and that the property of $\frac{1}{2}$ Float Saturation is no longer claimed at all. The Office states if Applicants maintain such claim language, the portion of the original application which provides support for the scope of the entire combination of each claim in a single embodiment should be set forth.

a. Independent claims 1, 12 and 23 amended.

Claims 1, 12 and 23 have been amended to clarify that the superabsorbent material has been neutralized from about 30 mole % to about 65 mole % with a monovalent metal hydroxide, and further from about 5 mole % to about 40 mole % with a divalent metal hydroxide. Support for this amendment can be found in the originally filed Specification on page 11 lines 19-20, page 12 lines 5-6, page 12 lines 28-29, page 13 lines 14-15, page 14 lines 4-5, page 14 lines 29-30, page 15 lines 15-16 and page 16 lines 4-5.

b. Examples.

With respect to the Examples, the Office states that the examples "result in materials or composites which have a combination of properties...which are not the combinations claimed." In response, Applicants respectfully note that a claim need only contain those elements, steps, and/or relationships which constitute that portion of the claimed combination which the applicant considers as the new or improved portion (e.g., 37 C.F.R. 1.75(e)(3)). Applicants are not aware of a provision under 35 U.S.C. 112, first paragraph, or in the MPEP, which requires Applicants to claim all properties that happen to be measured and exhibited in the examples. In contrast, the MPEP indicates that only those elements that are described by Applicants as being critical or essential to the invention must be claimed (e.g., MPEP § 2163(I)(B)). It can be seen in the specification that materials of the present invention "may" have a combination of properties (e.g., Specification page

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6 lines 2-3). Thus, it is clear that the combination of properties exhibited in Table 1 are not necessarily critical or essential to the invention. 35 U.S.C. 112, first paragraph merely requires that a person skilled in the art would understand that Applicants have invented, and have been in possession of, the invention as claimed (MPEP § 2163(II)(A)(3)(a)(ii)). Each and every element of the independent claims, and the corresponding dependent claims, is supported in the originally filed specification, as discussed herein.

c. Conclusion.

For at least these reasons, Applicants respectfully submit that this rejection of independent claims 1, 12 and 23, and their respective dependent claims 2-10, 13-22 and 24-26 under 35 U.S.C. 112, first paragraph has been overcome. Applicants respectfully request that this rejection be withdrawn.

5. Claims 1-10 and 12-26 are rejected under 35 U.S.C. 112, first paragraph.

In paragraph 6 of the Office Action mailed May 3, 2007, the Office states claims 1-10 and 12-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The Office states the claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The Office states as set forth in the MPEP 2164.04, the Examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. The Office states while the analysis and conclusion of a lack of enablement are based on the factors discussed in MPEP 2164.01(a) and the evidence as a whole, it is not necessary to discuss each factor in the written rejection. The Office also states the language should focus on those factors, reasons and evidence that lead the Examiner to conclude the specification fails to teach how to make and use the claimed invention without undue experimentation or that the scope of enablement provided to one skilled in the art is not commensurate with the scope of protection sought by the claims.

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First, the Office states that as set forth in each of the independent claims, the invention is an absorbent composite which comprises superabsorbent material. The Office states the superabsorbent material, as best understood, is selected for use therein based on 1) specific desired physical characteristics including its Absorption Time, liquid capacity and Gel Bed Permeability and 2) has been specifically neutralized and the absorbent composite, i.e. the superabsorbent material alone or in combination with other material, is selected for use therein based on 1) specific desired physical characteristics including Drop Penetration Value. Therefore, the Office states the claims necessarily also define the invention by the tests or processes used to determine the selection of the superabsorbent used and the physical characteristics 1) of such, e.g. the superabsorbent prior to combination with further composite components, if any, the fibers rather than setting forth specific superabsorbent compositions or specific superabsorbent/composite combination compositions of the end product, and the tests or processes used to determine the selection of the composite used and the physical characteristics 1) of such, i.e. not the specific superabsorbent/composite combination compositions of the end product.

Second, the Office states since the claimed physical characteristics 1) of the superabsorbent prior to combination with the composite to form the end product must be determined and the claimed physical characteristics 1) of the composite must be determined, e.g., by a test used to measure such characteristics, the scope of the claims is enabled to the extent the test, i.e. the method and equipment or parameters thereof, measuring such characteristic is described or disclosed.

The Office states in the instant application, for example, the claims require a superabsorbent material which has a specific liquid capacity and Absorption Time. The Office states while on pages 29-31, a test called "FAUZL" is set forth which measures "a final equilibrium absorption capacity" and "Absorption Time" using a timer capable of reading 120 minutes, it is still not clear the liquid capacity claimed is the same as the "final equilibrium absorption capacity" described and it is described that there are instances where measurement of 200 minutes not just 120 minutes are required but equipment and the method of measurement have still not been set forth for those instances. The Office states for another example, the test for the determination of the Drop Penetration Value, as best understood the "Saline Drop Penetration Test", is an evaluation of the hydrophobicity of a specific superabsorbent material/fluff composite, see page 28, lines 22-24, i.e.

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50/50 ration, specific basis weight, specific density, which specific composite is not required by the claim. The Office also states a test for determining the Drop Penetration Value of any composite as claimed has not been set forth. In other words, the Office states, the tests used to measure the claimed physical characteristics are not described or disclosed at all or sufficiently, i.e. not enabled, and thus, the claims relying on such are not enabled.

Third, the Office states the claims set forth the physical characteristics desired of the starting SAM, as best understood, rather than the specific composition of the SAM or SAM/composite in the end product. Therefore, the Office states relying on *Ex parte Slob*, 157 USPQ 172, such claims could cover any conceivable combination of materials whether presently existing or which might be discovered in the future and which would impart the desired characteristics, i.e. the claims are too broad and indefinite since purport to cover everything having the characteristics regardless of its composition. The Office notes that 35 USC 101 sets forth "Whoever invents or discovers any new and useful...composition of matter...may obtain a patent therefor...title, i.e. does not include compositions that have yet to be invented and discovered. The Office also notes, for example, the specification at page 5, first full paragraph, e.g. "may include".

Fourth, the Office states similarly, the claims do not set forth any structure of the composite but the superabsorbent, i.e. claims could cover any conceivable SAM material either presently existing or which may be discovered in the future. The Office states the claims do not set forth that the article is only SAM, i.e. the claims could cover any conceivable present or future absorbent material which includes at least SAM. The Office also states the claims do not set forth a specific process by which the SAM of the article is made into the composite, i.e. the claims could cover any conceivable present or future process of making. In other words, the Office states the claims could cover any conceivable present or future absorbent composite end product which includes SAM. The Office notes again *Ex parte Slob*, *supra*.

Fifth, the Office states the lack of enabling description is now further exacerbated for the reasons set forth in paragraph 5 *supra* and paragraph 8 *infra*, i.e. the claimed neutralization of the superabsorbent invention is not supported by the original application and/or it is unclear how it is being neutralized as claimed.

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The Office states that for these reasons and evidence, the Examiner concludes the specification fails to teach how to make and use the claimed invention without undue experimentation or that the scope of enablement provided to one skilled in the art is not commensurate with the scope of protection sought by the claims.

a. Claims 1-10 and 12-26 are not unpatentable under 35 U.S.C. 112, first paragraph.

i. Absorption Capacity

The Office states that it is not clear whether the "liquid capacity claimed is the same as the 'final equilibrium absorption capacity' described". In response, Applicants have amended independent claims 1, 12 and 23 to clarify that the liquid capacity is the equilibrium absorption capacity as measured by the FAUZL test. Support for this amendment can be found in the originally filed Specification on page 31 lines 15-25.

ii. FAUZL Test Equipment

The Office states that the FAUZL test calls for "a timer capable of reading 120 minutes". However, the test procedure reveals that "there are instances where measurements of 200 minutes not just 120 minutes are required". In response, Applicants respectfully submit that a timer which is capable of reading 120 minutes does not preclude a timer that can also read 200 minutes. One of ordinary skill in the art, using common sense, would readily recognize that if a measurement of 200 minutes was required, a timer that is capable of reading 200 minutes could be utilized. Alternatively, one of ordinary skill in the art, using common sense, would also recognize that a timer could be quickly stopped at, for example, 100 minutes and then instantly restarted for another 100 minutes to obtain a measurement of 200 minutes. Thus, Applicants respectfully submit that the FAUZL test is enabled.

iii. Drop Penetration Test

The Office alleges that the Drop Penetration Test has not been described or disclosed sufficiently. Applicants respectfully disagree; however, in order to progress prosecution, Applicants have amended independent claims 1, 12 and 23 to remove the feature of the absorbent

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composite exhibiting a Drop Penetration Value of about 2 seconds or less as measured by the Saline Drop Penetration Test.

iv. Ex parte Slob

The Office alleges that claims 1-10 and 12-26 set forth the physical characteristics rather than the specific composition of the SAM or SAM/composite, and that the claims "could cover any conceivable combination of materials whether presently existing or which might be discovered in the future and which would impart the desired characteristic, i.e. the claims are too broad and indefinite since they [*sic*] purport to cover everything having the characteristics regardless of its composition..." In response, Applicants respectfully submit that claims 1-10 and 12-26 do not fall within the scenario of Ex parte Slob. For example, in Ex parte Slob, the Board of Patent Appeals and Interferences held that the expression "a liquefiable substance having a liquefaction temperature from about 40°C to about 300°C and being compatible with the ingredients in the powdered detergent composition" was too broad and indefinite since, *inter alia*, the claim recites compounds by what it is desired that they do rather than what they are. Ex parte Slob 157 USPQ 172, 173 (Bd. Pat. App. & Int. 1967). In contrast to Ex parte Slob, Applicants' amended independent claims 1, 12 and 23 include numerous structural features. For example, the present invention includes an absorbent composite, which in itself is much narrower than a liquefiable substance as claimed in Ex parte Slob. In addition, the present invention also comprises superabsorbent material, another structural feature. Furthermore, the superabsorbent material must also include the features of an Absorption Time and an equilibrium absorption capacity. Still further, the superabsorbent has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and further from 5 mole % to 40 mole % with a divalent metal hydroxide, which is yet another structural feature. Thus, the composites, disposable products and disposable absorbent garments of the present invention are clearly narrower and more structurally defined than the invention claimed in Ex parte Slob. Dependent claims 2-9, 12-20 and 22-26 add even further limitations to the invention. Thus, it can be seen that the present invention does not fall under the scenario of Ex parte Slob, but in fact meets the requirements of 35 U.S.C. § 112.

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v. Superabsorbent material has been neutralized.

The Office alleges that it is unclear how the superabsorbent material has been neutralized. In order to progress prosecution, Applicants have amended independent claims 1, 12 and 23 to include the feature of "the superabsorbent material has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and further from 5 mole % to 40 mole % with a divalent metal hydroxide." Support for this amendment can be found on page 11 lines 19-20, page 12 lines 5-6, page 12 lines 28-29, page 13 lines 14-15, page 14 lines 4-5, page 14 lines 29-30, page 15 lines 15-16 and page 16 lines 4-5.

b. Conclusion.

For at least these reasons, Applicants respectfully submit that this rejection of independent claims 1, 12 and 23, and their respective dependent claims 2-10, 13-22 and 24-26 under 35 U.S.C. 112, first paragraph has been overcome. Applicants respectfully request that this rejection be withdrawn.

6. Claims 1-10 and 12-26 are rejected under 35 U.S.C. 112, first paragraph.

In paragraph 7 of the Office Action mailed May 3, 2007, the Office rejects claims 1-10 and 12-26 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The Office states the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Office also states that as set forth in MPEP 2163, the issue of a lack of adequate written description may arise even for an original claim when an aspect of the claimed invention has not described with sufficient particularity such that one skilled in the art would recognize that the Applicant had possession of the claimed invention. Further, the Office states the claimed invention as a whole may not be adequately described if the claims require an essential or critical feature which is not adequately described in the specification and which is not conventional in the art to or known to one of ordinary skill in the art. The Office states further as set forth in *Fujikawa v Wattanasin*, 93 F.3d

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1559, 1571, the lack of adequate written description also arises if the knowledge and level of skill in the art would not permit one skilled in the art to immediately envisage the product claimed from the disclosed process. The Office states as discussed in the preceding rejection, the tests which are essential or critical to the selection of the claimed superabsorbent and/or composite have not been disclosed or disclosed sufficiently, there is a lack of disclosure, and, at the very least, definite claiming of any specific composite or end product composition which is supported by the original application, and the claims are too broad in that the claims cover any conceivable combination of ingredients either presently existing or which may be discovered in the future and which may impart the desired characteristics. Therefore, the Office states the claimed invention as a whole is not adequately described because the claims require an essential or critical feature which is not adequately described in the specification and which is not conventional in the art to or known to one of ordinary skill in the art and the knowledge and level of skill in the art would not permit one skilled in the art to immediately envisage the product claimed from the disclosed process. The Office notes again, e.g., the first full paragraph on page 5 of the disclosure, i.e. a nonconventional approach using superabsorbent material which may include ranges of properties, i.e. properties defined by nonenabled tests, and, e.g. the Summary of the Invention section on page 3 and the paragraph bridging pages 5-6, especially the use of the terminology "may", i.e. the composites may have superabsorbent materials which may include certain properties which may address certain deficiencies. Therefore, the Office states one skilled in the art would recognize that the Applicant did not have possession of the claimed invention.

a. Claims 1-10 and 12-26 are not unpatentable under 35 U.S.C. 112, first paragraph.

i. Test Procedures.

The Office alleges that the test procedures are "nonenabled." While Applicants respectfully disagree, in order to progress prosecution, Applicants have amended independent claims 1, 12 and 23 to remove the feature of the absorbent composite exhibiting a Drop Penetration Value of about 2 seconds or less as measured by the Saline Drop Penetration Test. In addition, Applicants have amended claims 1, 2, 12, 13 and 23 to clarify that the liquid capacity is the equilibrium absorption capacity as measured by the FAUZL test. Furthermore, Applicants have discussed above that the

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FAUZL test is enabled with respect to the equipment (i.e., the timer). In addition, independent claims 1, 12 and 23 have been amended to clarify that "the superabsorbent material has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and further from 5 mole % to 40 mole % with a divalent metal hydroxide." Support for this amendment can be found on page 11 lines 19-20, page 12 lines 5-6, page 12 lines 28-29, page 13 lines 14-15, page 14 lines 4-5, page 14 lines 29-30, page 15 lines 15-16 and page 16 lines 4-5.

ii. Claims are not too broad.

The Office alleges that claims 1-10 and 12-26 are too broad. Claims 10 and 21 have been canceled. As discussed in Section 5(iv) above with respect to Ex parte Slob, the present invention includes an absorbent composite, which is much narrower than a liquefiable substance, such as claimed in Ex parte Slob. In addition, the present invention also comprises superabsorbent material, another structural feature. The superabsorbent material must further include the features of an Absorption Time and an equilibrium absorption capacity. Still further, the superabsorbent has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and further from 5 mole % to 40 mole % with a divalent metal hydroxide, yet another structural feature. Thus, the claims of the present invention are clearly more narrow and structurally defined as compared to the claims of Ex parte Slob, and one of ordinary skill in the art would readily recognize that the claims are not too broad.

iii. Use of the term "may".

The Office alleges that by use of the word may in the specification, "one of ordinary skill in the art would recognize that the Applicant did not have possession of the claimed invention." Applicants respectfully disagree. Use of the word "may" merely means that in one embodiment, the invention has the item. In other words, some embodiments described in the specification have the item, while other embodiments do not. It is noted that not all embodiments described in the specification need be claimed. It is also noted that Applicants are not aware of any provisions in 35 U.S.C. 112, first paragraph, or in the MPEP, which prohibit use of the word "may" in the specification. 35 U.S.C. 112, first paragraph merely requires that a person skilled in the art would understand that Applicants have invented, and have been in possession of, the invention as claimed.

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As discussed above, each and every element of the independent claims, and the corresponding dependent claims, is supported in the originally filed specification.

b. Conclusion.

For at least these reasons, Applicants respectfully submit that this rejection of independent claims 1, 12 and 23, and their respective dependent claims 2-10, 13-22 and 24-26 under 35 U.S.C. 112, first paragraph has been overcome. Applicants respectfully request that this rejection be withdrawn.

7. Claims 1-10 and 12-26 are rejected under 35 U.S.C. 112, second paragraph.

In paragraph 8 of the Office Action mailed May 3, 2007, the Office rejects claims 1-10 and 12-26 under U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Office states that in claims 1, 12 and 23 it is unclear how the superabsorbent has been neutralized, i.e. how can the superabsorbent be neutralized from 30 to 65 mole % with a monovalent hydroxide and yet also be neutralized from 5 to 40 mole % with a divalent hydroxide? The Office also states for the reasons also set forth supra, the claims are indefinite, vague and too broad, see Ex parte Slob, supra.

a. Claims 1-10 and 12-26 are not unpatentable under 35 U.S.C. 112, second paragraph.

i. Superabsorbent.

The Office alleges that it is unclear how the superabsorbent has been neutralized. Applicants respectfully disagree that it is unclear; however, in order to progress prosecution, Applicants have amended independent claims 1, 12 and 23 to include the feature of "the superabsorbent material has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and further from 5 mole % to 40 mole % with a divalent metal hydroxide." Support for this amendment can be found on page 11 lines 19-20, page 12 lines 5-6, page 12 lines 28-29, page 13 lines 14-15, page 14 lines 4-5, page 14 lines 29-30, page 15 lines 15-16 and page 16 lines 4-5.

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ii. Ex parte Slob

The Office repeats the statement that the claims are indefinite, vague and too broad as per Ex parte Slob. Applicants have discussed above that the claims are not indefinite, vague and too broad as per Ex parte Slob, and that the present invention does not fall under the scenario of Ex parte Slob, but in fact meet the requirements of 35 U.S.C. § 112.

b. Conclusion.

For at least these reasons, Applicants respectfully submit that this rejection of independent claims 1, 12 and 23, and their respective dependent claims 2-10, 13-22 and 24-26 under 35 U.S.C. 112, second paragraph has been overcome. Applicants respectfully request that this rejection be withdrawn.

8. Claim Interpretation.

In paragraph 9 of the Office Action mailed May 3, 2007, the Office notes that lines 6-8 of claim 1 and similar language in claims 12 and 23 describe the processing of the superabsorbent material, i.e. a product by process, see MPEP 2113. The Office states, however, due to the lack of clarity as alleged by the Office, a composite, product or garment as claimed in claims 1, 12 and 23, respectively, which includes a superabsorbent which is neutralized at least 30 mole percent by at least one of a monovalent or divalent metal hydroxide at some time prior to the completion of the manufacture of the end product will be considered to meet the claim limitation.

a. Neutralize.

i. Not Product-by-Process.

Applicants respectfully disagree that the phrase "has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and further from 5 mole % to 40 mole % with a divalent metal hydroxide" as featured in independent claims 1, 12 and 23 makes each claim a product-by-process claim. In contrast to the contention set forth by the Office, the phrase merely describes the structure of the superabsorbent material, similar to how an M&M's® candy is a

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chocolate morsel that has been coated with a candy shell, for example. Applicants therefore respectfully request that the claims not be viewed as product-by-process claims.

ii. Claim language interpretation.

In the claim feature "*the superabsorbent material has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and from 5 mole % to 40 mole % with a divalent metal hydroxide*", the Office has stated that "a superabsorbent which is neutralized at least 30 mole percent by at least one of a monovalent or divalent metal hydroxide at some time prior to the completion of the manufacture of the end product will be considered to meet the claim limitation" (*emphasis added*). Applicants respectfully disagree with the Office's interpretation of the claim language. Use of the word "and" in Applicants' claim language means that both a monovalent metal hydroxide and a divalent metal hydroxide are required. It does not mean at least one of a monovalent or a divalent metal hydroxide. It appears that the Office is improperly interpreting the word "and" to be the word "or", thus attempting to transform the two elements into alternative elements, rather than required elements. The claim clearly states "and", and one of ordinary skill in the art would not interpret the word "and" to be equivalent to the word "or". Applicants therefore respectfully request that the claim language be interpreted as requiring both elements, rather than as alternative elements.

9. Claims 1-10 and 12-26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dow PCT '818.

In paragraph 11 of the Office Action mailed May 3, 2007, the Office rejects claims 1-10 and 12-26 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over International Patent Publication No. WO 01/41818 issued to The Dow Chemical Company (hereinafter "Dow").

With respect to claims 1-4 and 24, the Office directs Applicants to see, e.g., the Claim Language Interpretation section *supra* and Dow at the abstract, page 3, last full paragraph, page 5, first through third full paragraphs, page 6, line 19-page 7, line 5, page 7, line 19-page 8, line 19,

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page 9, lines 5-7 and 16-20, and page 9, line 24-page 14, last line of Dow, i.e. an absorbent composite comprising superabsorbent material as disclosed, e.g. superabsorbent material comprising partially neutralized acrylic acid and which has been neutralized to the percentage claimed, as best understood, the Office directs Applicants to see the Claim Language Interpretation section supra and page 6, lines 19 et seq, i.e. at least 30 mole %, by alkali metal hydroxides, including specific mention of sodium hydroxide (alkali metals include calcium also), an internal crosslinking agent, a surface cross-linking agent, a capacity greater than 25/g/g and an Absorption Rate Index which is time which equals about $10+10a^2$ as claimed. The Office notes that, especially due to the lack of enablement, it is unclear whether this time is the same as the claimed "Absorption Time" nor not. The Office states that thus the Dow reference clearly teaches all the claimed structure and properties except for the characteristics of "Absorption Time" and the Gel Bed Permeability of the superabsorbent material as claimed and a Drop Penetration Value of the composite as claimed. The Office notes that the composite of Dow may be a 50% superabsorbent/50% fluff composite. However, the Office states, as noted supra, Dow does teach similar materials for similar purposes and same or substantially similar properties, i.e. a capacity and a slow absorption time. The Office again notes such characteristics are those of the superabsorbent making up the claimed composite, and such material, as now best understood, is, as best understood, tested prior to formation of such composite by the disclosed tests or processes, i.e. the specific characteristics of such material of the end product composite are unknown, and those of the composite, i.e. the specific characteristics of the end product composite are also unknown. Therefore, the Office's first position that for the reasons set forth supra, i.e. same or similar compositions, purposes, desired properties to accomplish such purposes, etc., there is reasonable factual basis to conclude that the structure of Dow also inherently possesses superabsorbent material and an absorbent composite with the claimed test characteristics or values when tested according to Applicants' tests, as best understood. The Office states, in any case, the Office's second position, at the very least, the general conditions of the claim are disclosed by Dow and it is not inventive, i.e. it would be obvious to one of ordinary skill in the art, to discover the optimum or workable ranges, i.e. Applicants' ranges, by routine experimentation, *In re Aller*, 105 USPQ 333 (CCPA 1955).

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With respect to claims 5-10 and 12-23 and 25-26, the Office directs Applicants to see the discussion of claims 1-4 and *supra* as well as page 9, line 28-page 11, line 13, and thus U.S. Patent No. 5,149,335 issued to Kellenberger (hereinafter Kellenberger '335"), U.S. Patent No. 5,147,343 issued to Kellenberger (hereinafter "Kellenberger '343"), U.S. Patent No. 4,798,603 issued to Meyer (hereinafter "Meyer"), U.S. Patent No. 5,520,673 issued to Yarbrough (hereinafter "Yarbrough"), and U.S. Patent No. 5,728,082 issued to Gustafsson (hereinafter "Gustafsson") incorporated thereby which teach the SAM material distributed homogenously within a composite, e.g. Kellenberger '343, zoned within a composite, e.g. Kellenberger '335, Meyer, Yarbrough, Gustafsson, within a layer of a plurality of layers of a composite, e.g. Gustafsson, Yarbrough or Meyer, alone or zoned in such layer, e.g. Yarbrough, zoned along a perimeter, e.g. Yarbrough, or laminated onto a substrate, e.g. Yarbrough.

a. Claims 1-10 and 12-26 are not unpatentable under 35 U.S.C. 102(b).

In accordance with MPEP § 2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The present invention, as set forth in the amended claims, is directed to absorbent composites (as well as products and garments that include the absorbent composites) which comprise superabsorbent material. The superabsorbent material has an Absorption Time of about $5+10a^2$ minutes or greater, wherein a is the mean particle size of the superabsorbent material in millimeters, and an equilibrium absorption capacity of about 15 g/g or greater as measured by the FAUZL test. In addition, the superabsorbent material has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and further from 5 mole % to 40 mole % with a divalent metal hydroxide.

In comparison, WO 01/41818 (hereinafter referred to as "Wilson") does not teach an absorbent composite per se, but rather teaches a process for producing a superabsorbent material. In addition, Wilson also does not disclose that the superabsorbent material has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and further from 5 mole % to 40 mole % with a divalent metal hydroxide. Furthermore, Wilson does not teach a superabsorbent material

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having an Absorption Time of about 5+10 a² minutes or greater, and an equilibrium absorption capacity of about 15 g/g or greater.

Therefore, with respect to the independent claims, as well as their corresponding dependent claims, each and every element of the present invention is not disclosed by Wilson, as required by MPEP § 2131. For at least these reasons, Applicants submit that the rejection claims 1-10 and 12-26 has been overcome. Applicants respectfully request that this rejection under 35 U.S.C. §102(b) be withdrawn.

b. Claims 1-10 and 12-26 are not unpatentable under 35 U.S.C. 103(a).

In order for the Office to show a prima facie case of obviousness, M.P.E.P. §2143 requires that the Office must meet three criteria: (1) the prior art references must teach or suggest all of the claim limitations; (2) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to combine the references; and (3) there must be some reasonable expectation of success. Applicants respectfully submit that the Office has failed to meet its burden under (1), (2), and (3) as Wilson does not teach or suggest all of the claim limitations, there is no suggestion or motivation to modify Wilson, and there would not be a reasonable expectation of success to utilize Wilson to arrive at Applicants' recited invention.

i. Requirement (1) of the test under M.P.E.P. §2143 has not been met.

With respect to requirement (1), Wilson does not teach or suggest all of the claim limitations. In particular, as presented in the independent claims, and thus also their dependent claims, independent claims 1, 12 and 23 each contain at least one element not found in the cited Wilson reference, which is an absorbent composite comprising a superabsorbent material that has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and further from 5 mole % to 40 mole % with a divalent metal hydroxide.

In contrast to Applicants' invention, Wilson is not directed to an absorbent composite having the features of Applicants' invention. Rather, Wilson is directed to a method for the preparation of superabsorbent polymers (Wilson, page 3 lines 16-17). Pertinent disclosure by Wilson to a

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neutralized polymer occurs at page 6 line 19 – page 7 line 5. Wilson discloses that compounds useful to neutralize acid groups include alkali metal hydroxides, and alkali metal carbonates and bicarbonates (Wilson, page 6 lines 26-29). Wilson further teaches that preferably, sodium or potassium hydroxides or carbonates are employed, each of which is monovalent (Wilson page 6 lines 29-30). Wilson does not teach the use of both a monovalent metal hydroxide and a divalent metal hydroxide, and Wilson certainly does not teach a superabsorbent material that has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and further from 5 mole % to 40 mole % with a divalent metal hydroxide.

It is submitted by Applicants that, as discussed above, the claims of the present invention are not product-by-process claims. However, even if the claims were product-by process, the resulting product of Wilson would not be the same as Applicants' invention. One of ordinary skill in the art would readily recognize that the superabsorbent material present in the composite of Applicants' invention would include both monovalent metal ions and divalent metal ions based on the fact that the polymer had been neutralized with both. In addition, the monovalent and divalent metal ions would be present in particular quantities based on the degree of neutralization desired for each metal ion. The presence of both the monovalent and divalent metal ions help allow Applicants to achieve properties of the absorbent composite that are desired. In contrast, as taught by Wilson, a resulting superabsorbent polymer according to the method of Wilson would only have monovalent ions present on the polymer, thus resulting in a chemically different structure (and thus a different product) than that of Applicants.

Therefore, it can be seen that Wilson does not teach or suggest all of the claim limitations of independent claims 1, 12 and 23, as well as their respective dependent claims, as required by the first prong of the test set forth by MPEP § 2143.

ii. Requirement (2) of the test under M.P.E.P. §2143 has not been met.

With respect to requirement (2), one of ordinary skill in the art would not be motivated to utilize Wilson to result in Applicants' invention. For example, Wilson provides no teaching that would lead one of ordinary skill in the art to develop an absorbent composite that comprises a

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superabsorbent material that has been neutralized from 30 mole % to 65 mole % with a monovalent metal hydroxide, and further from 5 mole % to 40 mole % with a divalent metal hydroxide.

In addition, it seems clear that the Office is utilizing the teachings of Applicants in an attempt to modify Wilson to allegedly arrive at Applicants' invention. Applicants respectfully note that M.P.E.P. § 2143 requires that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicants' disclosure. *In re Vaack*, 947 F.2d 4899 (Fed. Cir. 1991). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Gordon*, 733 F.2d at 902, 221 USPQ at 1127. *In re Fritch*, 23 USPQ 2nd 1780, 1783-1784 (Fed. Cir. 1992). It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. *In re Gorman*, 933 Fed. 2nd 982, 987, 18 USPQ 2d 1885, 1888 (Fed. Cir. 1991). *In re Fritch*, 23 USPQ 2nd 1780 at 1784 (Fed. Cir. 1992). Any suggestion by the Office to modify Wilson based on the knowledge gained from Applicants is improper.

Therefore, one of ordinary skill in the art would not be motivated to utilize Wilson to obtain Applicants' invention.

iii. No reasonable expectation of success.

With respect to requirement (3), since Wilson not teach or suggest all of the claim limitations of independent claims 1, 12 and 23, as well as their respective dependent claims, and it does not provide motivation to do so, there would not be a reasonable expectation of success to arrive at Applicants' invention.

iv. Claims 1-10 and 12-26 are not unpatentable over Wilson.

Applicants' invention would not have been contemplated without the use of the teachings of Applicants. In addition, Wilson not only lacks teaching of the Applicants' recited features, but further, one of ordinary skill in the art would not be motivated to utilize Wilson to arrive at Applicants' invention. An obviousness determination is not the result of a rigid formula

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disassociated from the consideration of the facts of the case. The common sense of those skilled in the art can demonstrate why some combinations would have been obvious where others would not.¹ As noted in M.P.E.P. §2142, in establishing obviousness, the mere fact that the references can be combined to arrive at the claimed subject matter does not render the resultant combination obvious, unless the prior art also suggests the desirability of the combination. *In re Mill*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). As recently set forth by the Supreme Court in *KSR International Co. v. Teleflex, Inc., et al.*, the reason to combine the elements of the prior art in the claimed fashion must be apparent to one skilled in the art.² A close reading of Wilson clearly indicates that the combination of claimed elements would not have been apparent to one skilled in the art, particularly without Applicants' disclosure as a blueprint (which the Office had the benefit of utilizing).³

For at least the reasons discussed above, Applicants respectfully submit that the rejection of independent claims 1, 12 and 23, as well as their respective dependent claims under 35 U.S.C. §103(a) has been overcome. Applicants respectfully request that this rejection be withdrawn.

10. Claims 1-10 and 12-26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the claims of copending Application No. 10/660982 in view of Dow '818.

In paragraph 13 of the Office Action mailed May 3, 2007, the Office provisionally rejects claims 1-10 and 12-26 on the ground of unstatutory obviousness-type double patenting as being

¹ *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc.*, No. 06-1402 (Fed. Cir. May 9, 2007) See also *KSR Int'l Co. v. Teleflex, Inc., et al.* 127 S.Ct. 1727, 1731-1732 and 1741-1743 (2007).

² *Id.*

³ M.P.E.P. §2142 further provides that in order to reach a proper determination under 35 U.S.C. §103(a), the Examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. Knowledge of Applicants' disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences." The tendency to resort to "hindsight" based upon Applicants' disclosure is often difficult to avoid due to the very nature of the examination process. However, as stated by the Federal Circuit, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art. *Grain Processing Corp. v. American-Maize-Products, Co.*, 840 F.2d 902, 904 (Fed. Cir. 1988).

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unpatentable over the claims of copending Patent Application Serial No. 10/660,982 in view of Dow.

a. Not only remaining rejection.

Since this "provisional" double patenting rejection is not the only remaining rejection for the present application, it would be premature to address this rejection any further at this time. Applicants agree to consider measures to obviate the provisionally obvious-type double patenting rejection in view of copending Application No. 10/660982 in view of Dow '818, should it become necessary.

11. Timely Response.

A Reply to the Office Action mailed on May 3, 2007 was timely filed on October 3, 2007, accompanied with a two-month extension. This Revised Reply to the Notice of Non-Compliant Amendment mailed December 28, 2007 is timely filed on January 15, 2008.

12. Request for Continued Examination (RCE).

The Examiner's attention is respectfully drawn to the Request for Continued Examination which was contemporaneously filed on October 3, 2007 with the original Reply to the May 3, 2007 Office Action.

13. Conclusion.

The amendments requiring correction have been presented in this response to the Notice of Non-Compliant Amendment. All other amendments remain as presented in the response dated October 3, 2007.

Applicants intend to be fully responsive to the outstanding Office Action. If the Examiner detects any issue which the Examiner believes Applicants have not addressed in this response, or if

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any additional information is required, the Examiner is respectfully requested to contact the undersigned at (920) 721-4405.

Applicants sincerely believe that this Patent Application is now in condition for allowance and respectfully request favorable consideration and the timely allowance of the pending claims.

Applicants do not believe that any fee is due in connection with this revised response. However, the Commissioner is hereby authorized to charge any deficiency or overpayment of any fees to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875. If a fee is required for an extension of time under 37 C.F.R. 1.136 not accounted for above, such extension is requested and should also be charged to our Deposit Account.

The undersigned may be reached at: (920) 721-4405.

Respectfully submitted,

RICHARD N. DODGE II ET AL.

By




Bryan R. Rosiejka

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CERTIFICATE OF TRANSMISSION

I, Mary L. Marchant, hereby certify that on January 15, 2008, this document is being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (571) 273-8300.


Mary L. Marchant